



1/6

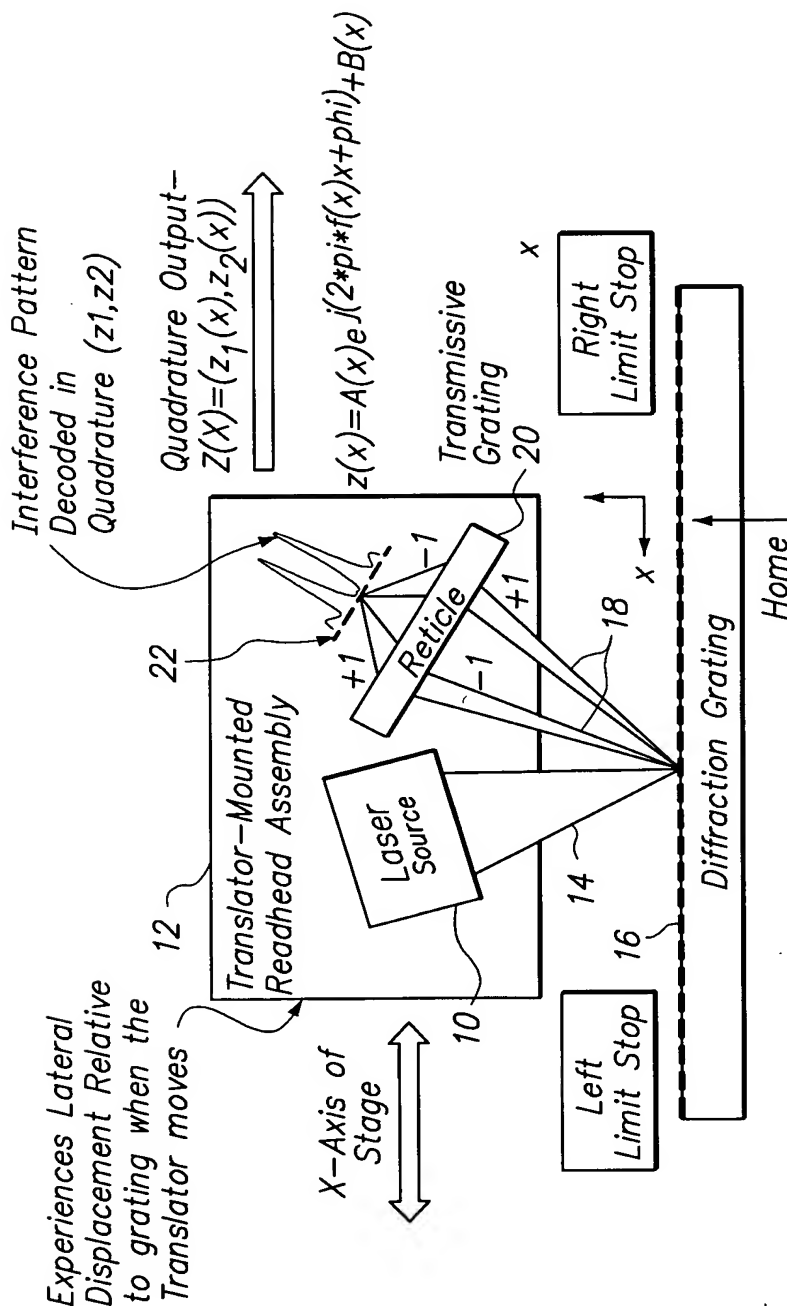


FIG. 1

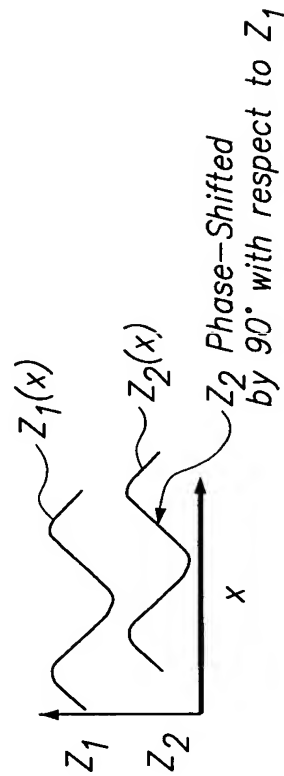
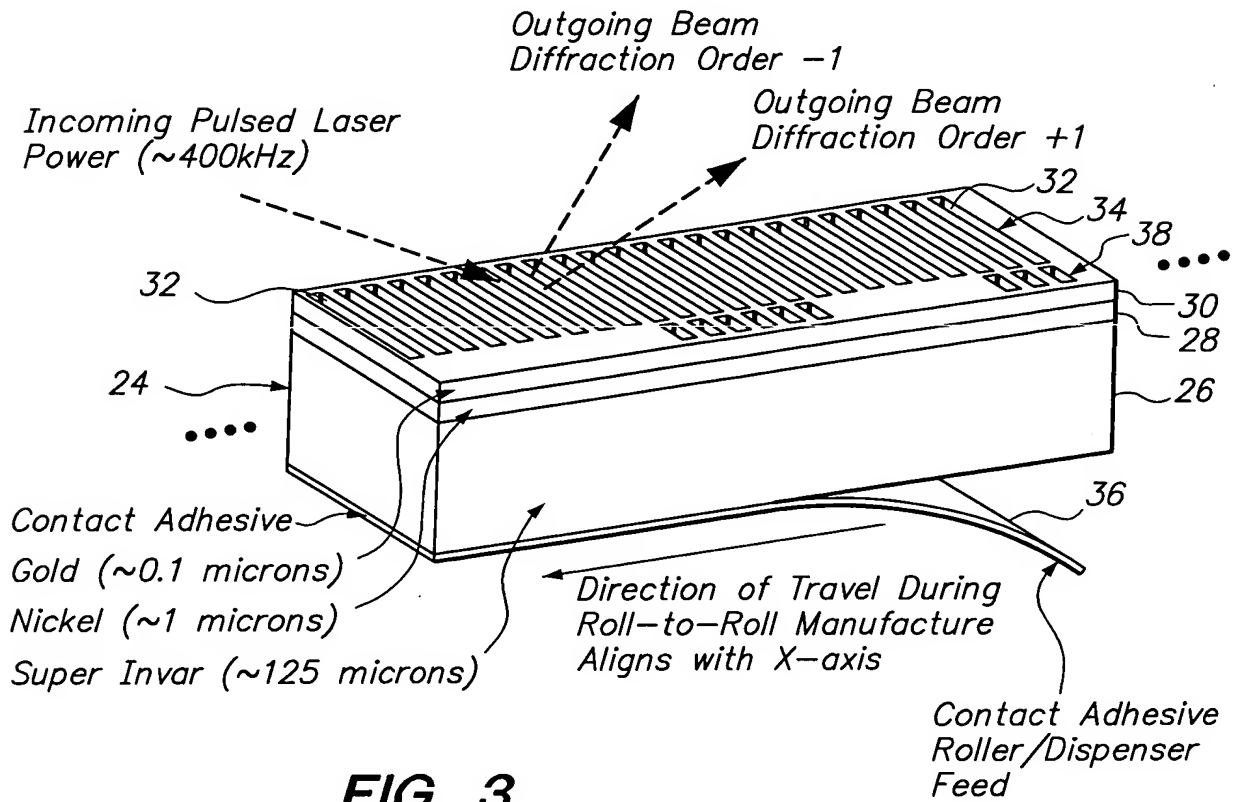
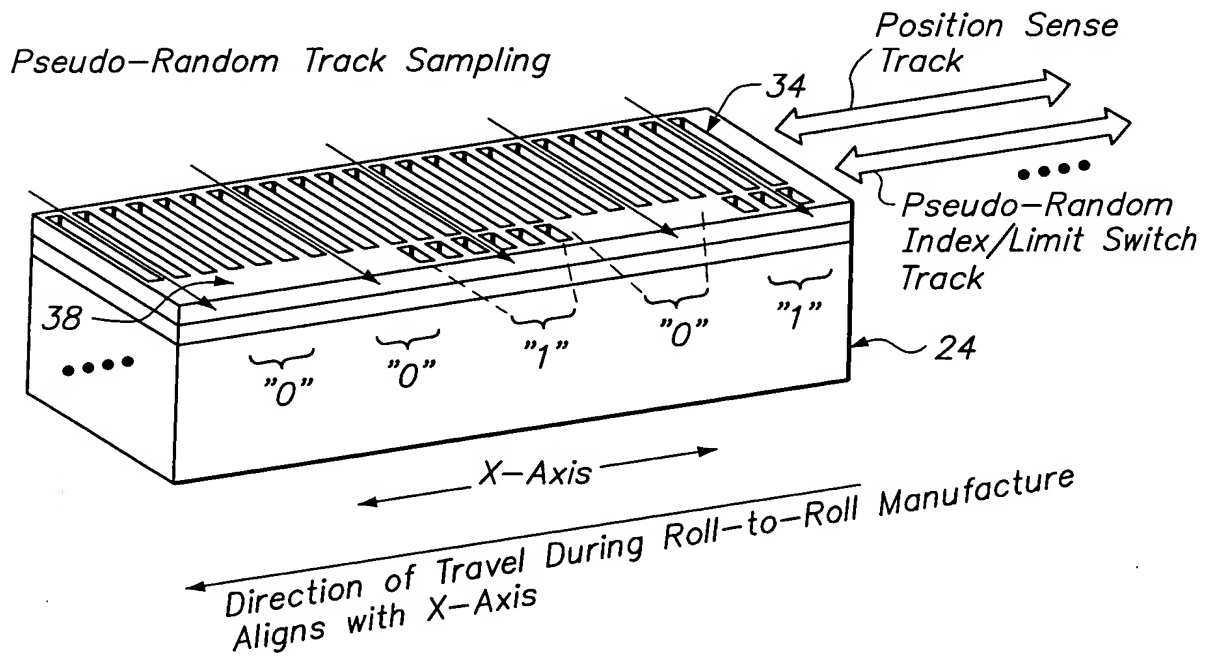


FIG. 2

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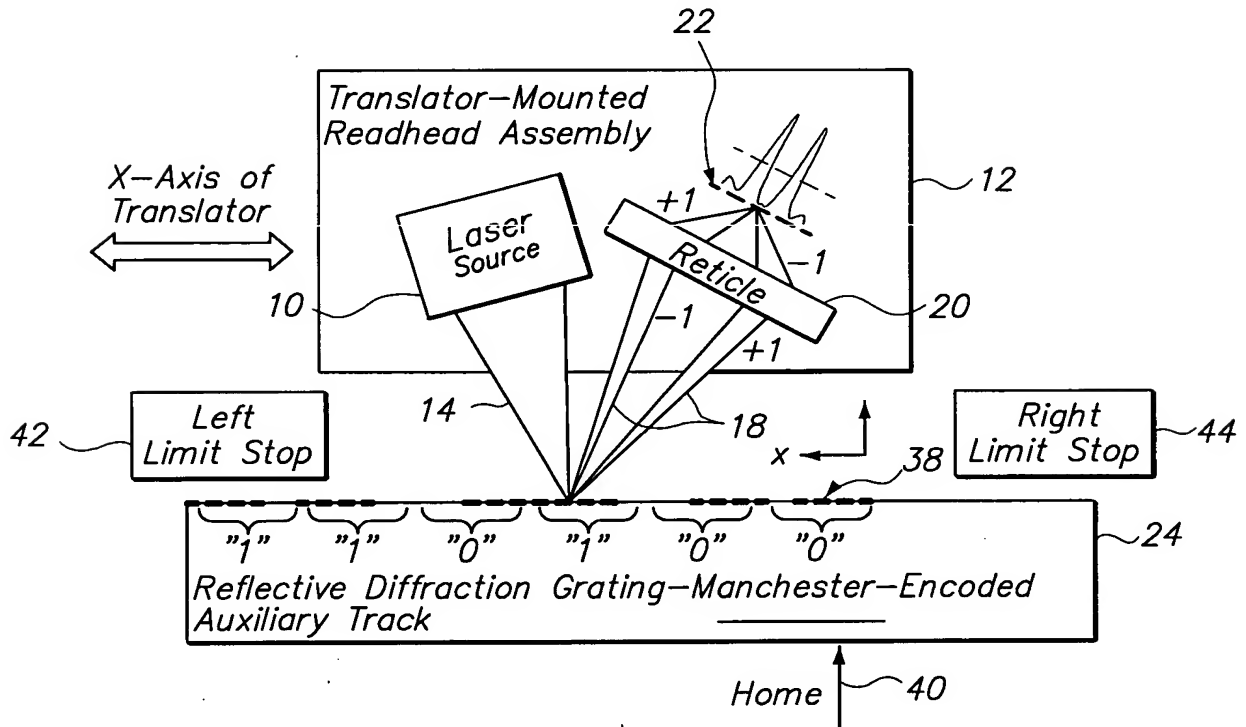


**FIG. 3**



**FIG. 4**

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**FIG. 5**

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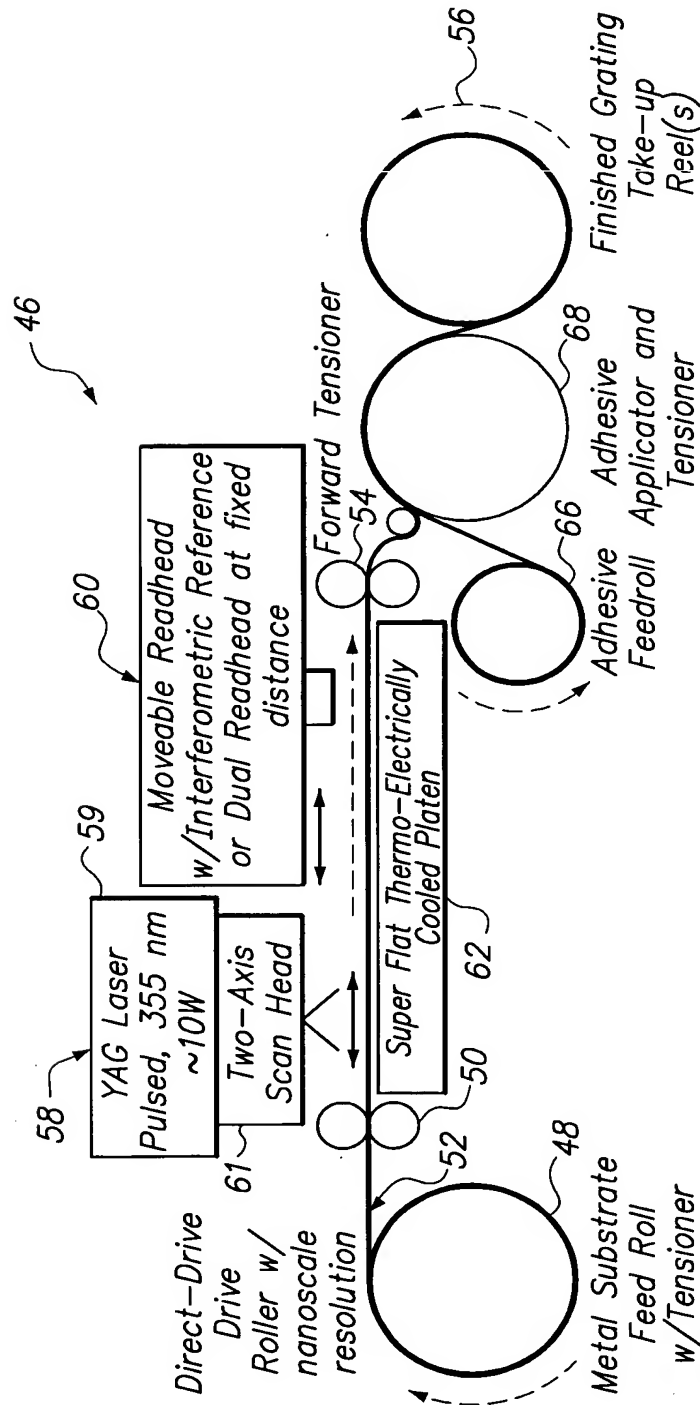
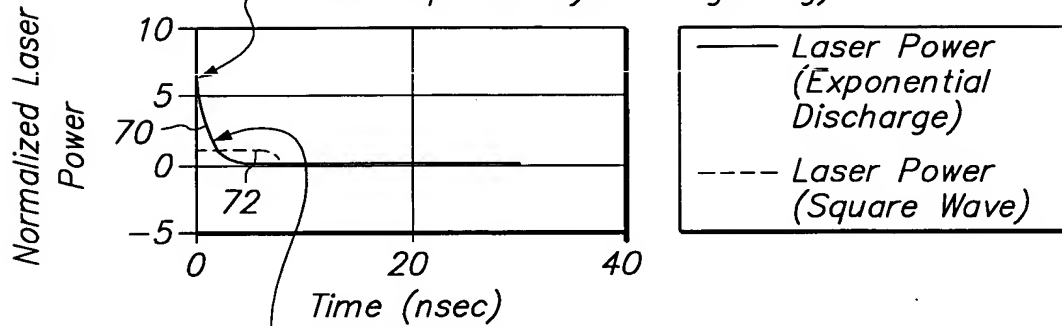


FIG. 6

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Comparison of Laser Power (Exponential Discharge ( $\tau=1$  ns) vs. Square Wave (7 ns) with equivalent Pulse Energy)

Front End Power Amplification ( $\sim 7:1$ ) achieves equivalent pulse energy as Square Wave (Accelerates breaking of atomic bonds within top two layers of grating)



Tail of Exponential Pulse continues burn-off of top two layers (Time constant of pulse lies below the thermal time constant of the underlying substrate)

FIG. 7

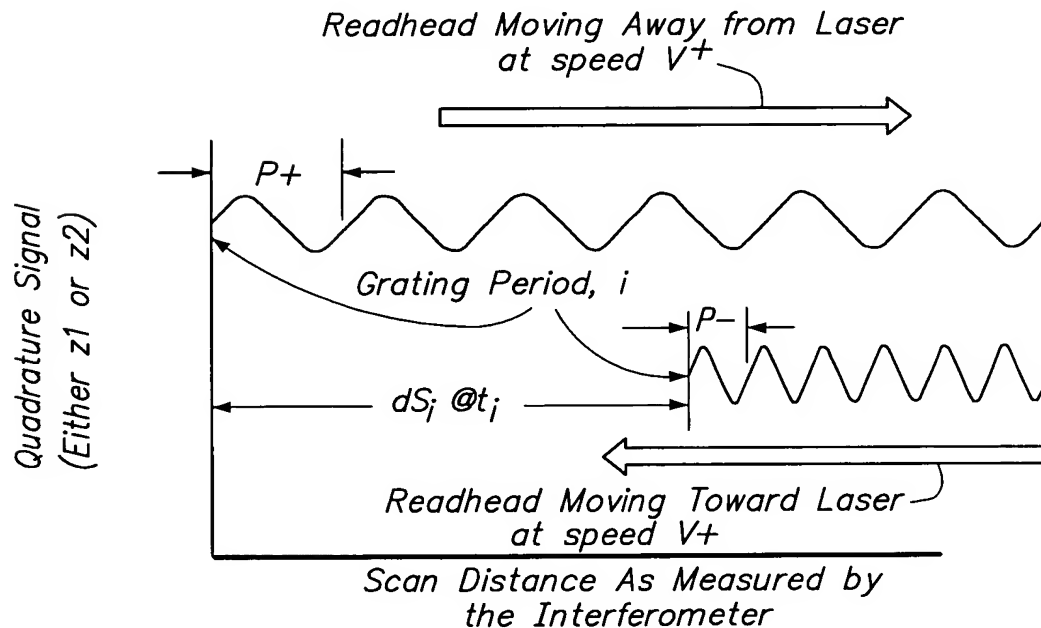
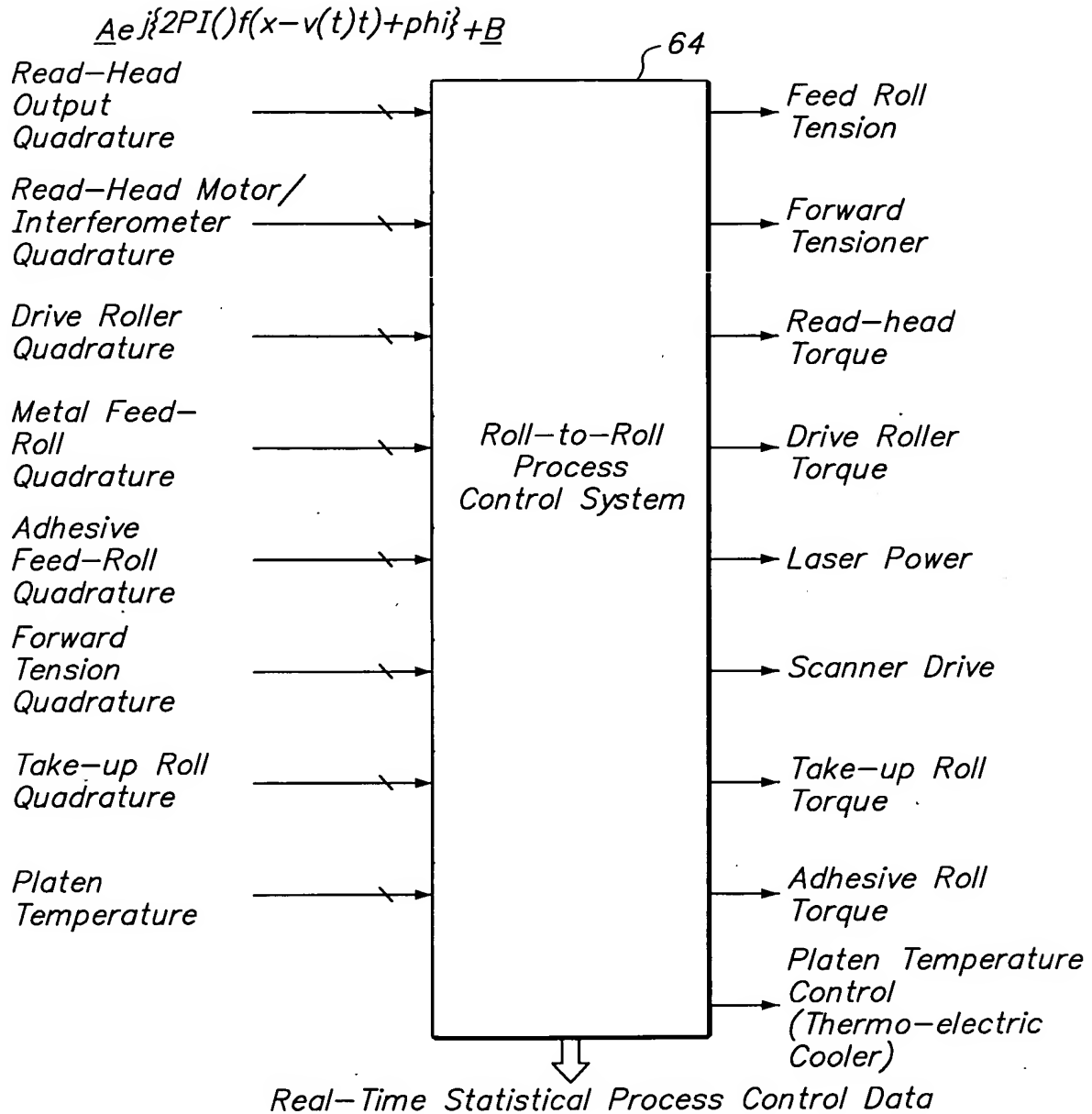


FIG. 8

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**FIG. 9**